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Applying the health belief model and behavior of diabetic patients: A systematic review and meta-analysis

ABSTRACT

The patient's belief and knowledge about his or her illness is the most important factor of disease control; the aim of present study is to perform a systematic review-based meta-analysis of health belief and its dimension's mean score in diabetic patients.

The present systematic review and meta-analysis was conducted in 2020. Data were gathered by searching the Google Scholar, Scopus, PubMed, Web of Science, and Science Direct databases from 2010 to 2020. Key words were "health belief", "HBM", "diabetic patients", "diabetes mellitus". To estimate the pooled score of health belief and its dimensions, the random-effects meta-analysis was performed using STATA 15. The presence of heterogeneity across the studies was assessed with the I² statistic. A forest plot was used to report the results.

The mean of health belief was (3.422, 95% CI: 3.128–3.716) based on the fixed effect model and (3.422, 95% CI: 3.128–3.716) based on the random effect model, is the same. The strongest dimension is "perceived benefits" with an mean (3.8) and the weakest dimension is "perceived sensitivity" with an mean (3.0). **Conclusions.** Policymakers and decision makers in the field of hygiene and controlling non-communicable

diseases should focus on the role of patients' awareness of their disease and try to improve it. In the meantime, the dimension of "perceived sensitivity" needs more attention. Strategies such as holding training classes and using technological infrastructure to promote this concept should be used. (Clin Diabetol 2021; 10; 2: 209–220)

Key words: health belief model, diabetic patients, systematic review, meta-analysis

Introduction

Chronic diseases are costly problems for health systems. According to the World Health Organization, the four most common chronic diseases are cardiovascular diseases, respiratory diseases, cancer, and diabetes [1]. Diabetes is a serious and long-term disease that refers to conditions in which the level of glucose in a person's blood increases and the body is unable to produce insulin or cannot use the insulin effectively [2]. The main types of diabetes include type1 diabetes, type 2 diabetes, gestational diabetes, and diabetes due to certain diseases [3]. Diabetes is a leading cause of complications such as kidney failure, myocardial infarction, blindness, and amputation of the lower limbs [4]. Diabetes and its complications often put a heavy burden on health systems and individuals. Global diabetes costs are projected to increase from \$ 673 billion to \$ 802 billion from 2015 to 2040 [5, 6]. In general, diabetic patients consume the largest amount of health care resources [1]. Achieving an efficient health system is realized when the gains are more than the resources spent and steps are taken to reduce the waste of resources [7]. On the other hand, people's lifestyles are

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